

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-12. (canceled)

13. (Amended) A method of distinguishing P-gp/MRP multiple drug resistance from BCRP or other non-P-gp/non MRP multiple drug resistance in cancer cells exhibiting such resistance which comprises: administration of an effective amount of a chemosensitizing reversal agent and a chemotherapeutic agent to which cancer cells are resistant and measuring cancer cell survival.

a. contacting P-gp/MRP multidrug resistant cancer cells with a chemotherapeutic agent to which said cancer cells are resistant and measuring cancer cell death;

b. contacting said P-gp/MRP multidrug resistant cancer cells with a test chemosensitizing reversal agent and a chemotherapeutic agent to which said cancer cells are resistant and measuring cancer cell death;

c. contacting BCRP multidrug resistant cancer cells with a chemotherapeutic agent to which said cancer cells are resistant and measuring cancer cell death;

d. contacting said BCRP multidrug resistant cancer cells with said test chemosensitizing reversal agent and a chemotherapeutic agent to which said cancer cells are resistant and measuring cancer cell death;

e. contacting non-P-gp/non MRP multidrug resistant cancer cells with a chemotherapeutic agent to which said cancer cells are resistant and measuring cancer cell death;

f. contacting said non-P-gp/non MRP multidrug resistant cancer cells with said test chemosensitizing reversal agent and a chemotherapeutic agent to which said cancer cells are resistant and measuring cancer cell death;

g. distinguishing P-gp/MRP, from BCRP or other non-P-gp/non MRP multiple drug resistance by comparing cancer cell death of step a to step b, step c to step d and step e to step f wherein an increase in cell death in comparing step c to d and step e to f shows said test chemosensitizing reversal agent is a chemosensitizing reversal agent having BCRP or other non-P-gp/non MRP multiple drug resistance.

14.(amended) The method according to claim 13 wherein the chemotherapeutic agent used is one to which the cancer cells are resistant increase in cancer cell death by addition of the test chemosensitizing reversal agent is about 22% or above.

15. (original) The method according to claim 13 wherein the chemotherapeutic agent is selected from the group consisting of mitoxantrone, doxorubicin, and topotecan.

16. (original) The method according to claim 13 wherein the chemosensitizing reversal agent is selected from the group consisting of fumitremorgin A, fumitremorgin B and fumitremorgin C.

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17. (original) The method according to claim 16 wherein the chemosensitizing reversal agent is administered prior to, concurrently with, or after administration of the chemotherapeutic agent.

18. (amended) A method of distinguishing P-gp/MRP multiple drug resistance from BCRP or other non-P-gp/non MRP multiple drug resistance in cancer cells exhibiting such resistance which comprises: ~~administration of an effective amount of a chemosensitizing reversal agent and a chemotherapeutic agent to which the cancer cells are multiple drug resistant and measuring chemotherapeutic agent accumulations in the cell.~~

a. contacting P-gp/MRP multidrug resistant cancer cells with a chemotherapeutic agent to which said cancer cells are resistant and measuring chemotherapeutic agent accumulations in the cell;

b. contacting said P-gp/MRP multidrug resistant cancer cells with an effective amount of a test chemosensitizing reversal agent and a chemotherapeutic agent to which said cancer cells are resistant and measuring chemotherapeutic agent accumulations in the cell;

c. contacting BCRP multidrug resistant cancer cells with a chemotherapeutic agent to which said cancer cells are resistant and measuring chemotherapeutic agent accumulations in the cell;

d. contacting said BCRP multidrug resistant cancer cells with said test chemosensitizing reversal agent and a chemotherapeutic agent to which said cancer cells are resistant and measuring chemotherapeutic agent accumulations in the cell;

e. contacting non-P-gp/non MRP multidrug resistant cancer cells with a chemotherapeutic agent to which said cancer cells are resistant and measuring chemotherapeutic agent accumulations in the cell;

f. contacting said non-P-gp/non MRP multidrug resistant cancer cells with said test chemosensitizing reversal agent and a chemotherapeutic agent to which said cancer cells are resistant and measuring chemotherapeutic agent accumulations in the cell;

g. distinguishing P-gp/MRP, from BCRP or other non-P-gp/non MRP multiple drug resistance by comparing measured chemotherapeutic agent accumulations in the cell of step a to step b, step c to step d and step e to step f wherein an increase in chemotherapeutic agent accumulations in the cell in comparing step a to b, step c to d and step e to f distinguishes

whether said test chemosensitizing reversal agent is a chemosensitizing reversal agent having P-gp/MRP or BCRP or other non-P-gp/non MRP multiple drug resistance.

19.(amended) The method according to claim 18 wherein the ~~chemotherapeutic agent used is one to which the cancer cells are resistant~~ increase in chemotherapeutic agent accumulation by addition of the test chemosensitizing reversal agent is about 13 % or above.

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20. (original) The method according to claim 18 wherein the chemotherapeutic agent is selected from the group consisting of mitoxantrone, doxorubicin, and topotecan.

21. (original) The method according to claim 18 wherein the chemotherapeutic agent is substituted by a drug surrogate.

22. (original) The method according to claim 18 wherein the chemosensitizing reversing agent is selected from the group consisting of fumitremorgin A, fumitremorgin B and fumitremorgin C.

23. (original) The method according to claim 22 wherein the chemosensitizing reversal agent is administered prior to, concurrently with, or after administration of the chemotherapeutic agent.

24. (amended) A method of determining the presence and magnitude of cancer cell BCRP multiple drug resistance or other non P-gp/non MRP multiple drug resistance in cancer cells exhibiting such resistance which comprises: ~~administration of an effective amount of a chemosensitizing reversal agent and chemotherapeutic agents to resistant cancer cells from humans and measuring cancer cell survival.~~

a. contacting BCRP multidrug resistant cancer cells with a chemotherapeutic agent to which said cancer cells are resistant and measuring cancer cell death;

b. contacting said BCRP multidrug resistant cancer cells with a test chemosensitizing reversal agent and a chemotherapeutic agent to which said cancer cells are resistant and measuring cancer cell death;

c. contacting non-P-gp/non MRP multidrug resistant cancer cells with a chemotherapeutic agent to which said cancer cells are resistant and measuring cancer cell death;

d. contacting said non-P-gp/non MRP multidrug resistant cancer cells with said test chemosensitizing reversal agent and a chemotherapeutic agent to which said cancer cells are resistant and measuring cancer cell death;

e. determining the presence and magnitude of BCRP or other non-P-gp/non MRP multiple drug resistance by comparing cancer cell death of step a to step b, and step c to step d wherein an increase in cancer cell death indicates higher levels of BCRP or other non-P-gp/non MRP multiple drug resistance.

*C-1
C-2*
25. (amended) The method according to claim 24 wherein the chemotherapeutic agent used is one to which the cancer cells are resistant increase in cancer cell death by addition of the test chemosensitizing reversal agent is about 22% or above.

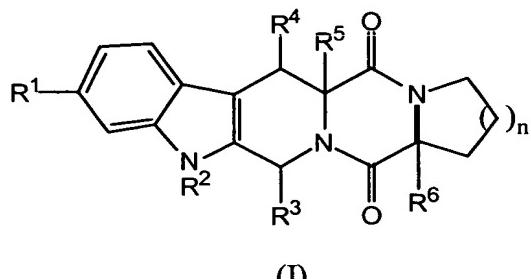
26. (original) The method according to claim 24 wherein the chemotherapeutic agent is selected from the group consisting of mitoxantrone, doxorubicin, and topotecan.

27. (original) The method according to claim 24 wherein the chemosensitizing reversal agent is selected from the group consisting of fumitremorgin A, fumitremorgin B and fumitremorgin C.

28. (original) The method according to claim 27 wherein the chemosensitizing reversal agent is administered prior to, concurrently with, or after administration of the chemotherapeutic agent.

29-56. (canceled)

57. (previously presented) The method according to claim 13 wherein the chemosensitizing reversal agent is selected from a compound having the Formula (I)



wherein:

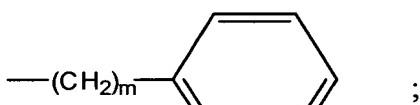
n is an integer of 0, 1, or 2;

R¹ is hydrogen or alkoxy of 1 to 10 carbon atoms;

R² is hydrogen or alkenyl of 2 to 10 carbon atoms;

R³ is hydrogen, alkyl of 1 to 10 carbon atoms, alkenyl of 2 to 10 carbon atoms,

R⁷NH(CH₂)_v- or

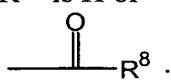


m is an integer of 1 to 6;

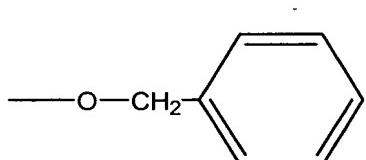
v is an integer of 1 to 4;

R⁴, R⁵ and R⁶ are hydrogen;

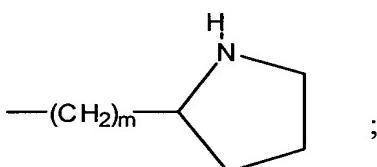
R⁷ is H or



R⁸ is selected from alkyl of 1 to 10 carbon atoms, -(CH₂)_mCO₂H,

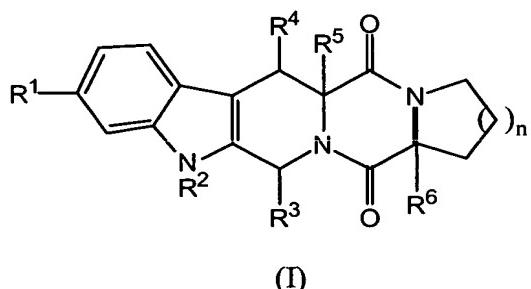


and



or a pharmaceutically acceptable salt thereof.

58. (previously presented) The method according to claim 18 wherein the chemosensitizing reversing agent is selected from a compound having the Formula (I)

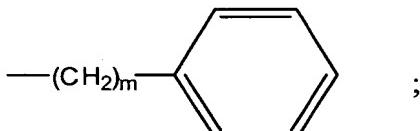


(I)

wherein:

n is an integer of 0, 1, or 2;

R¹ is hydrogen or alkoxy of 1 to 10 carbon atoms;
R² is hydrogen or alkenyl of 2 to 10 carbon atoms;
R³ is hydrogen, alkyl of 1 to 10 carbon atoms, alkenyl of 2 to 10 carbon atoms,
R⁷NH(CH₂)_v- or

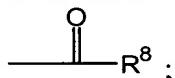


m is an integer of 1 to 6;

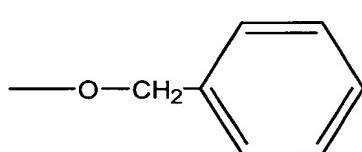
v is an integer of 1 to 4;

R⁴, R⁵ and R⁶ are hydrogen;

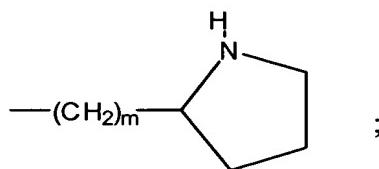
R⁷ is H or



R⁸ is selected from alkyl of 1 to 10 carbon atoms, -(CH₂)_mCO₂H,

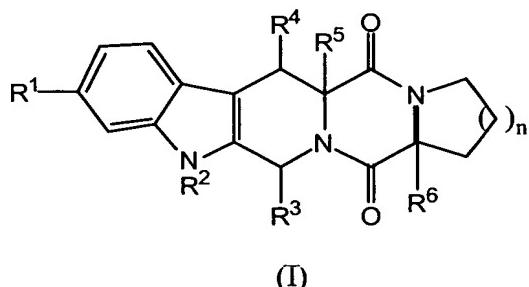


and



or a pharmaceutically acceptable salt thereof.

59. (previously presented) The method according to claim 24 wherein the chemosensitizing reversal agent is selected from a compound having the Formula (I)



(I)

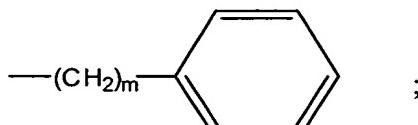
wherein:

n is an integer of 0, 1, or 2;

R¹ is hydrogen or alkoxy of 1 to 10 carbon atoms;

R² is hydrogen or alkenyl of 2 to 10 carbon atoms;

R³ is hydrogen, alkyl of 1 to 10 carbon atoms, alkenyl of 2 to 10 carbon atoms,
R⁷NH(CH₂)_v- or

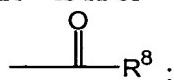


m is an integer of 1 to 6;

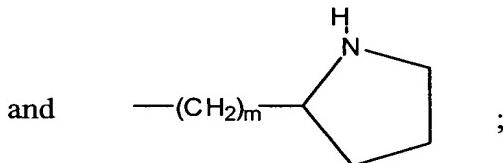
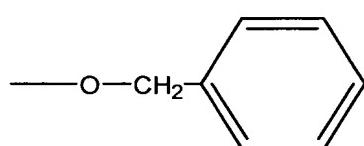
v is an integer of 1 to 4;

R⁴, R⁵ and R⁶ are hydrogen;

R⁷ is H or



R⁸ is selected from alkyl of 1 to 10 carbon atoms, -(CH₂)_mCO₂H,



or a pharmaceutically acceptable salt thereof.

60-63. (canceled)